Thirty cases of nephrotomy showed a recurrence in fifty-six per cent.

Thirty-three pyelotomies showed fifty-one per cent. recurrence.

Twelve nephroctomies showed stone formation in the other kidney in one case.

These figures show that we may have an unknown condition in individuals which causes stone formation and also that in the kidneys themselves conditions exist that influence formation.

Cabot thinks that infection of the kidney does not produce any greater liability to recurrence of stone than it does in the primary formation of stone.

This may be true, but it seems to me that the cause of infection, or the means that continues the infection after the stone is removed, is a potent factor. This, as a rule, is due to the lack of proper drainage either in the pelvis or in the kidney proper, from tissue destruction. This would also apply to the length of time the stone had been in the kidney. If a large area of tissue had been destroyed and the cavity drains well, there is less likelihood of stone formation than there would be in a small cavity, which was poorly drained.

The fact that more stones recur in patients under thirty-five than over does not upset this idea of drainage, because the stone-forming tendency is also greater at that time of life.

Diet and medication seem to have little effect in preventing recurrence of renal calculi. Most authors prescribe diets, mineral waters and various drugs, all of which have no specific effect, but are such that tend to aid the digestive and eliminative processes. As this is a matter of years and not a few months, if we are to derive any benefit at all it is well to regulate the habits of the individual in as simple a way as possible, or he will quickly discard your restrictions.

It is well to have the patient keep in as good a condition of health as possible by eating a plain mixed diet, avoiding alcoholics or too much tea or coffee, taking regular exercise and drinking plenty of water.

At the time of operation for renal calculi, we should ascertain, if possible, in case of pelvic stone, if any condition exists that prevents the pelvis from emptying freely. This may be due to ureteral kinking from a movable kidney; a constriction of the ureter or pressure from an aberrant vessel.

In the kidney the cavities, left after the removal of calculi, should be opened widely into the pelvis so that the urine readily drains from them.

After operations I have, in a few cases, lavaged the pelvis after the patients had recovered from their operation. This certainly hastens the clearing of the urine where there has been infection, but whether it has any effect in preventing stone recurrence, I cannot state.

It is a question at times whether we should again operate on some of these patients.

I have recently seen a man over fifty who had four years ago several calculi removed from one kidney. These had caused considerable destruction of the parenchyma. He had, and has, a high blood pressure and is not a good subject for surgery, being months in recovering from the effects of his operation. At present he has again several calculi in the kidney, but the function of this organ is almost as good as its fellow and the man is feeling well. I have advised him to be under observation, but unless impelling symptoms appear, not to be operated upon.

We should after an operation for renal calculi, impress upon our patients the possibility of stones recurring and the necessity of his keeping under observation. X-ray examinations should be made from time to time and the occasional examination of the urine and the lack of symptoms should not be relied upon.

We should, in operating, try to do so in such a way that we do not leave a large amount of scar tissue. Keep in mind the possibility of a second operation.

The use of rubber drainage tubes, or prolonged drainage with much scar tissue resulting, is a thing that can be avoided by seeing that the urine can drain freely into the bladder and after treatment through the ureteral catheter if necessary.

I recently removed a kidney from which a calculus was taken two years ago. The wound was drained by means of tubes and a sinus persisted after their removal, due to a constriction in the ureter that was not recognized. In order to get the kidney out, I had to dissect it from a large mass of scar tissue which was everywhere adherent and must interfere with surrounding organs.

What I have tried to convey, in this short paper, is the necessity for a better study of cases of nephrolithiasis before, during and after operation.

Book Reviews

Surgical Clinics of Chicago. October, 1918. Vol. 2, No. 5. Published bi-monthly by W. B. Saunders Co., Philadelphia. Price, per year, $10.

Contents—A. D. Bevan: Congenital wry neck. Desmoid tumor of abdominal wall. Epithelioma of leg. Ulcer of stomach on lesser curvature. Abscess of lung. D. N. Eisendrath: Clinical lecture on the acute abdomen. C. L. Mix: Gastric carcinoma. E. A. Printy: Demonstration of perfected technic for posterior gastro-enterostomy and for cholecystotomy. E. L. Moorhead: Exstrophy of bladder. C. M. McKenna: Clinic on genito-urinary surgery; papilloma of bladder; kidney stone; ureteral stone; acute epididymitis. T. J. Watkins: Presentation of cases treated by radium for hemorrhages due to benign causes. C. B. Reed: Obstetric clinic. C. A. Parker: Neglected club-feet. M. A. Bernstein: Teno-peritendinous transposition, improved technic for tendon transplantation. A. J. Ochsner: Bilateral Gritti-Stokes amputation.

The Human Skeleton. By Herbert Eugene Walter, Associate Professor of Biology, Brown University, with 175 illustrations and 214 pages. The Macmillan Company, New York.

The writer was much interested in reading the above work; it recalled his earlier studies in biology, and really recalled many interesting facts concerning the evolution of the skeleton, both in man and the lower animals. Everything is plainly stated and therefore will be very useful to the